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ABSTRACT

One of the major concerns of the First National City Bank's Public Affairs Committee is the cost and quality of urban education. The Bank's Regional Economics Section inquired into various aspects of public education in New York City. While the study is considered as a tentative exploration of a complex subject, questions concerning businessmen and citizens have been raised. The number of children in the public schools has grown by more than 20 percent since 1950, with blacks and Puerto Ricans comprising over 50 percent of the pupils. The school budget has increased by about 150 percent since 1960-61. The race/poverty nexus appears to correlate highest with low reading levels, and evidence suggests that the quality of the principal and staff has a profound influence on improvement in reading levels. Intermediate and high schools inherit problems of the elementary schools as well as additional serious problems. Finally, business has a vital role to play in education, not only in fostering the introduction of higher efficiency and cost/benefit thinking into the system, but also in direct assistance to vocational education, work-study, and other business-oriented programs in the schools. (Author/DM)

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Public Education in New York City

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Foreword

One of the major concerns of First National City Bank's Public Affairs Committee is the cost and quality of urban education. As part of this overall review, the Bank's Regional Economics Section, under the direction of Jac Friedgut, has set out to inquire into various aspects of public education in New York City.

The study was prepared principally by Rosalind Landes. It benefited from the assistance and critical review of numerous experts both in and outside of the City's school system. Without their generous cooperation, this report could not have been prepared. All opinions expressed in the report, however, unless otherwise attributed, represent our own independent evaluation and judgment.

While this study should be considered as only a tentative exploration of a very complex subject, we have attempted to raise questions that concern us as businessmen and citizens. We hope that it can serve as a useful basis for discussion and perhaps as a stimulus to a more fundamental probing into issues and answers in our educational system.

Thomas R. Wilcox
Vice Chairman
First National City Bank
November 1969

Highlights	1	
1. New York City and Its Public Schools: Education for a Society in Transition	2	The City, the People and the Schools The System's Structure Funding the Schools: Income Sources Uses of Funds The Public School System: Provider of Educational Services to Society
2. Elementary Schools	12	The Schools and the Disadvantaged Money and Output The Role of Quality
3. Intermediate and High Schools	24	Component Parts Some Problem Areas Costs
4. Where Does the School System Go from Here?	30	Managing by Results—and the Decentralization Question Potential Roles for Business
An Appendix: Preschool Programs	36	Preschool Under the Microscope Trying to Equate Supply and Demand

Photography: Steve Salmieri

Highlights

- Although the population of New York City has barely changed in the past two decades, the number of children in the City's public schools (1.1 million) has grown by more than 20 per cent since 1950. Blacks and Puerto Ricans, who comprise about 30 per cent of the City's total population, account for over 50 per cent of public school pupils.

- The school budget, at $1.5 billion for the current fiscal year, has increased by about 150 per cent since 1960-61.

- Slightly over one of every three fifth graders was reading one or more years below grade level; one in seven was reading two or more years below grade. The race/poverty nexus appears to correlate highest with low reading levels; other factors, including school "inputs" such as percentage of permanent teachers, appear to be less important.

- There appears to be little statistical correlation between improvement in reading levels (based on fifth graders in predominantly black/Puerto Rican schools) and quantitative inputs. Rather, the evidence suggests that the quality of the principal and staff has a profound influence on improvement. This raises the question as to how money can best be allocated in order to improve teacher and principal quality.

- Intermediate and high schools inherit the problems of the elementary schools. Also, they face additional challenges ranging from serious overcrowding to drug addiction. Results are less than ideal, with substantial numbers of students dropping out or gaining a low-surrender value "general" diploma.

- Business has a vital role to play in education, not only in fostering the introduction of higher efficiency and cost/benefit thinking into the system, but also in direct assistance to vocational education, work-study and other business-oriented programs in the schools.

New York City and Its Public Schools: Education for a Society in Transition

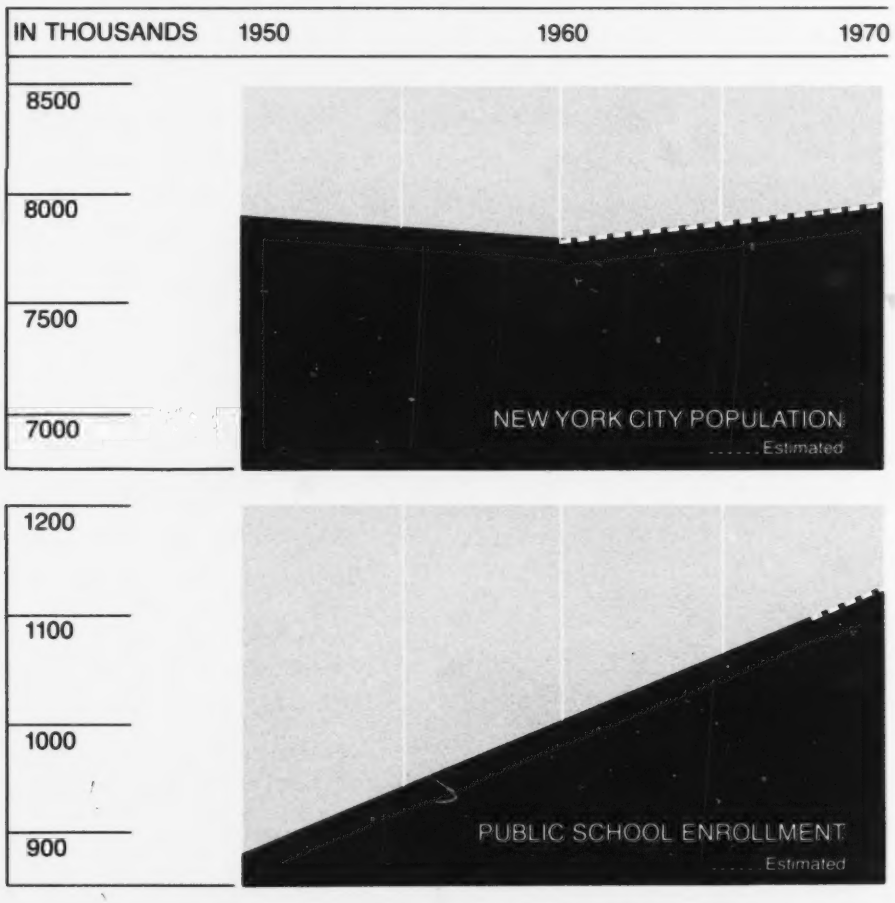
The City, the People and the Schools

New York City has a public school enrollment of 1.1 million pupils. This is larger than the entire population of such cities as Boston, St. Louis, San Francisco or Pittsburgh. The City has 897 public schools, including 615 elementary, 149 junior and intermediate high schools, 62 academic high schools, 28 vocational high schools and 43 special schools for socially maladjusted or handicapped children.

In the past two decades, the total population of the City has remained fairly stable, at about eight million. However, the composition has changed radically, with many of the relatively affluent moving out, while large numbers of newcomers—often poor, and black or Puerto Rican—have come into New York. Those moving in tend to be young and to have larger families than those leaving the City.*

Thus, two types of pressures bear on the public educational system. First, the number of school children has increased while the number of taxpayers to support this larger system through taxes has remained steady or even declined slightly.

Population and Public School Enrollment Trends in New York City, 1950-1970



Second, the ethnic composition of the pupil population has changed much more than that of the population at large. While the percentage of blacks and Puerto Ricans in the City's population has risen from about 20 per cent to roughly 30 per cent during the past decade,

*For more details on underlying demographic trends in New York City, see *Poverty and Economic Development in New York City,* published by First National City Bank in December 1968.

the percentage of these two groups in the public school population has climbed from 33 per cent to about 54 per cent. The number of Puerto Rican and black pupils has doubled in the past 11 years, while the number of white pupils is one fifth lower than it was in the late Fifties.

The changing ethnic patterns in the schools have been quite uneven in terms of their geographical distribution throughout the City. The outmigration of whites has been most pronounced in the past few years in Brooklyn and the Bronx, while Queens and Richmond have maintained their predominantly white profile. In Manhattan, the sharp losses of white students have continued, particularly on the east side of the island.

A great deal of potential pressure is removed from the public schools by the parochial and private schools where about two fifths (or 350,000) of the City's white children receive their education. The percentage of black children in nonpublic schools is infinitesimally small. As for Puerto Rican children, there are indications that they have begun to enter parochial schools in the central city in increasing numbers.

The System's Structure

The New York City Board of Education has been responsible for the City's public schools since about the turn of the century, when the five boroughs—and their educational systems—were consolidated and their administration centralized. The Board's mission is to run elementary, intermediate, academic, vocational and other schools and classes necessary to meet the education needs and demands of the City.

The school system employs over 85,000 people. This accounts for some 30 per cent of New York City's aggregate civil service payroll. The bulk of these (over 60,000) are teachers. An additional 12,000 are in supervisory and other noninstructional categories. About 6,000 are in administrative positions, and the remaining full- and part-time employees are in custodial, school lunch and other supporting services.

The City has 30 school districts* each of which has a nine-man advisory Local School Board, nominated by a community screening panel and appointed by the City Board. The new law requires proportional representation elections in all districts in January 1970 for selection of local Boards. Limited powers are to be granted to the newly elected Community Boards.

Funding the Schools: Income Sources

Over the past decade, the school budget has risen from $594 million in 1960-61 to about $1,481 million in 1969-70, representing a 149 per cent increase. The traditional way that education is funded in New York State is through a tax levy based on the assessed real property valuation of the school district. When the revenues available from

*Three experimental (demonstration) districts were also created. But, under the new State legislation, these might be absorbed into the regular districts from which they were originally formed.

this source are insufficient to provide adequate funding for education, additional state aid is available. The amount of State aid is thus inversely proportional to a school district's relative economic ability to support education, with some extra allowances permitted for density and other factors.

Although New York City has 30 regular school districts, until 1967 the City was considered as one school district when applying for funds from New York State. Because the assessed property valuation was so high, New York City received only the minimum flat grant of $238 per pupil from the State. In 1967, the legislation was changed to allow New York City to compute its aid formula on the basis of the property valuation figure for each of its five boroughs, which led to increased State aid.

Beginning in 1968, New York City received an additional $44 million from a new State Urban Aid fund established by the legislature to deal with education needs of the disadvantaged.

Within New York City, funds for education come not only from real estate taxes, but also from general fund revenues. General fund revenues include monies gathered from sales and income taxes on businesses and individuals as well as other miscellaneous sources.

In 1960, real estate taxes provided 56.3 per cent of the total tax levy in New York; in 1968-69, 49.9 per cent of the funds came from real estate. In both instances, the difference has been supplied from general fund revenues. The need for revenues from additional sources stems from the fact that all expenditures have risen much more than the assessed property valuation in New York City.

During the first half of the Sixties, the City provided about two thirds of the total funds for education, and the State about one third. Federal funds contributed less than one per cent toward the support of increased general education costs.

Most educators have long recognized the need for strong injections of State and Federal funds to help defray the rising costs of education, especially in those areas where a heavy burden rests on real estate revenues, for as the costs of other urban services increase, general fund revenues are often insufficient to cover all needs.

Title I of the Elementary and Secondary Education Act (ESEA) of 1965 provided for funding to qualifying schools for special compensatory programs, assuming that the on-going costs and programs funded as described above were continued. This was to ensure a maintenance of effort by the City and State. Generally, public and private schools are eligible for Elementary and Secondary Education Act (ESEA) funds if 50 per cent or more of the students reside in designated poverty areas, or 30 per cent or more of the students are reading at least one year below grade level in the fifth grade or two or more years below in the eighth grade or beyond. New York City easily

meets these requirements. Last year over 30 centralized Title I projects were operated by the Board of Education itself, at a cost of $52 million. School districts utilized an additional $13.5 million to operate their own projects.

Uses of Funds

Since 1960-61, school expenditures have climbed by almost 150 per cent, while the increase in the number of pupils in the system has been only 14 per cent. The large increase in per capita costs and expenditures reflects substantial jumps in various administrative and support costs and, to a lesser extent, teachers' salaries.

In the 1969-70 Budget, the average expenditures per pupil are approximately $839 in the regular elementary schools, $970 in the regular intermediate schools and $1,268 in the academic high schools. Special Service elementary and intermediate schools are $930 and $1,070, respectively. The averages are, however, deceptive and mask the wide divergence in her pupil costs among schools, which may run anywhere from about $600 to over $1,700.

Aside from differences in school organization, much of the variation in costs is attributable to the higher expenditure on more experienced teachers' salaries. Schools (with mostly white enrollments) having large numbers of teachers with long service have higher mandatory operating costs. The range of teacher salaries in 1968-69 was $6,760-$11,150. The latest United Federation of Teachers settlement effective September 1969 shifts the range substantially upwards to $9,400-$13,950, and accelerates the wage progression schedule from 14 to eight years. Also, teachers are now eligible for retirement pay after 20 years of service and 45 years of age, down from 25 years of service and age 55. This increases the likelihood of retirement for many long-service teachers.

The Public School System: Provider of Educational Services to Society

In spite of the increased resources which have been directed to education in New York City, criticism of the City's schools is widespread. Citizens are probably more sensitive about education than any other service they "buy" from the public sector with their tax dollars. They feel that if basic functions such as education are not properly performed, the whole rationale for men to live in organized taxpaying units is called into question.

It is well to remember that until recently, the New York City school system was generally acclaimed as the showcase of the nation. Since the inception of its consolidated school system, the City has been a leader in innovation in education. It was among the first to recognize the need to provide education geared to its varied ethnic strains, as typified by the early neighborhood schools which often took on many of the customs of the community. The City also geared educational resources to the economic needs of the times. It provided continuing and evening education for those who did not plan to continue on to college.

Rising costs—and taxes—related to the schools are, however, running into taxpayer resistance. These taxpayers, whether they be individuals who live in the City or businesses which depend largely on the City for their labor supply, might well be more amenable to supporting education if they were assured that the system was doing the job for which it was intended. This is similarly true for public transportation or any other urban service, where the price that thoughtful citizens are willing to pay is based on the efficacy and quality of the service.

A number of educational authorities suggest that the mission of an educational system is to pass on the accumulation of knowledge, and in so doing to seek the maximum development of an individual's ability, and equip him to deal with the changing demands of the modern world. This involves a number of objectives, from mastery of conventional tools such as reading and numbers manipulation to the somewhat more elusive—but equally critical—behavioral goals. At the same time, the student should be taught how to learn, because the world of the Eighties and Nineties may require skills only dimly perceived on the threshold of the Seventies.

These objectives are difficult to attain even where all segments of the society have common expectations. However, the educational and cultural backgrounds and aspirations of the various ethnic strains prominent in New York City today differ quite widely, and in some respects are even more diffuse than those of the groups most prevalent in previous decades. Moreover, the New York labor market has also changed, becoming increasingly white-collar oriented. Public education must adapt to these two realities.

Given the costs of education, it is legitimate for New York's people and businesses to ask how well the present school system meets the City's changing needs. If more money must be spent on education, as appears inevitable, into which areas will these investments be most effective? It is against the background of questions such as these that businessmen, who might normally be considered as outsiders with respect to education, must inquire into the process, and explore how their tax monies are being spent. □

Elementary Schools

The Schools and the Disadvantaged

The education of the disadvantaged in the nation's public schools was treated at length in *Equality of Educational Opportunity,* published under the auspices of the Department of Health, Education and Welfare and generally known as the Coleman Report. Although there has been criticism of the report, the detailed research it represents has not as yet been undertaken in any other study. It found that when economically disadvantaged children began school with an initial skill deficiency, the gap between their achievement and that of their advantaged peers widened, rather than narrowed, as the children progressed through school. The most important variables associated with achievement were the socioeconomic backgrounds of the pupils themselves. Traditional school inputs (teacher characteristics, school facilities, per capita costs, to name a few) were found to have a relatively small impact on achievement levels.

Elementary education is thus a focal point in any attempt to compensate for educational disadvantage.* Failure to master skills in the early grades too often leads to a continued pattern of failure, whereby both the children and the educators unwittingly expect and thus reinforce earlier failures in achievement.**

One might ask whether the propositions of the Coleman Report apply to New York City, and what possible roles socioeconomic factors and school inputs play in learning. While learning has many dimensions, the only measure of learning generally available throughout New York City's elementary and junior high schools (and in the public domain) are the Metropolitan Achievement Test (MAT) scores. Unfortunately, MAT scores quantify only reading ability and vocabulary knowledge. Therefore, they may suffer from cultural bias, inasmuch as their frame of reference is generally the white middle class value system to which inner-city children cannot easily relate.*** We are obliged to look at reading scores, keeping in mind that, to the extent that words like "chittlin" and "hustle" do not feature as prominently on the test as "boat," "lake" and "elm," the test is "rigged" in favor of children who are white and/or relatively well-off and against children who are black and/or poor.**** Despite the shortcomings in the design and administration of the tests, however, there is no agreed-upon substitute measure of output.

The Metropolitan Achievement Tests are given in April of each year. The "normal" achievement level for each grade is the number of

*Indeed, there are those who suggest that the "preschool" ages are the most important (e.g., "Why Some 3-Year Olds Get A's—And Some Get C's," by Maya Pines in *The New York Times Magazine,* July 6, 1969). For a brief description of preschool programs in New York City, see Appendix.

**See "Pygmalion in the Classroom," Robert Rosenthal and Lenore Jacobson, *The Urban Review*, September 1968.

***See, for example, "Planting Pansies on the Roof," by Miriam Wasserman, *The Urban Review,* January 1969.

****However, Martin Meyer argues that " 'Chittlin' tests which supposedly reward the sort of knowledge common in the slums are essentially useless because later surrender value of such knowledge is so slight." *The Urban Review*, February 1969.

years and months (one school year = 10 months) that a student in that grade has been in school. Thus, for a fourth grader, the normal reading level is 4 years and 7 months (4.7) when tested in April; for a fifth grader, 5 years and 7 months (5.7). The pupils are tested against other pupils in large metropolitan areas. The reading level used in this report is the average of the scores on the word knowledge and paragraph meaning parts of the test.

In 1968, less than half of New York City's students were reading at or above grade level. Slightly over one of every three fifth graders was reading one or more years below grade level; one in seven was reading two or more years below grade.

In the City's 557 elementary schools for which data were available,* there was great variation in the average fifth grade reading scores, from a low of 3.6 (more than two years behind grade) for a school in the predominantly Puerto Rican South Bronx to the highest score of 8.5 (almost three years above grade) for a school in "suburban" eastern Queens. Needless to say, variations in scores among individual pupils were much broader.

A statistical test was conducted to see how the following variables related to achievement (measured by 5th grade MAT):**

1. racial composition of the school
2. attendance level
3. percentage of free lunch
4. percentage of permanently licensed teachers
5. degree of crowding in the school
6. pupil mobility rate

The analysis attempted to measure the importance of these factors to the reading score. Taken together, the variables accounted for almost three fourths of the variation in reading scores. The factors most highly associated with higher achievement levels are a large percentage of white students and, to a smaller extent, a high attendance level and a small percentage of pupils eating free school lunch—considered by some to be a poverty index. (Complete statistical details are contained in a special technical appendix available upon request from the Economics Department.)

In other words, in New York City, as in the nation (according to the Coleman Report), middle-class children, predominantly white, do better than children from lower socioeconomic strata, which contain large numbers of minority group people. The traditional school in-

*This excludes the More Effective Schools (MES), which are discussed separately beginning on page 18.

**The step-wise multiple regression used all available variables from the new Program Budgeting reporting system, on a school-by-school basis. Clearly, both the scope and quality of the raw data pertaining to both the independent and dependent variables leave much to be desired and thus lead to no hard and fast conclusions. Nevertheless, it is submitted that analyses based on actual numbers, imperfect as they may be, constitute a useful complement to most other evaluations of the schools based largely on highly selective facts or impressions.

puts as measured here play a relatively minor role in relation to achievement.

Absolute reading levels, by themselves, are deficient in that they reflect a static condition as of a single point in time. To look at the effect of education a little more closely, the amount of improvement from one grade to the next may be a more important measure of achievement. The average improvement from the fourth grade in 1967 to the fifth grade in 1968 was one year and one month (1.1). However, when the same variables used to predict the actual fifth grade score are used in a regression to estimate the improvement from one year to the next, relatively little correlation exists. Most of such correlation as does exist is due to the influence of the racial variable. Some other variables also correlate positively, but quite weakly. The individual factors associated with the absolute level of achievement do not seem strongly related to the improvement in scores.

There are 150 schools (excluding MES) where 10 per cent or less of the student population was white (the rest being black and Puerto Rican). In these schools the average fifth grade reading score (1968) was 4 years and 6 months (4.6), and the average improvement from the fourth to fifth grade, 9 months. By comparison, in the 407 schools (excluding MES) where the racial composition was greater than 10 per cent white, the average fifth grade reading score was 6 years and 3 months, and the average improvement 1 year and 2 months. Comparisons between the black/Puerto Rican and the other schools for the different variables are indicated in the table.

Characteristics of Black/Puerto Rican* and Other Schools**

Averages	Black/Puerto Rican Schools*	Other Schools**
Reading score (5th Grade)	4.6 years†	6.3 years
Change in score	.9 years	1.2 years
Permanent staff	62%	72%
School utilization	102%	87%
Free lunch	54%	21%
Attendance	87%	90%
Mobility	42%	24%

*Defined as at least 90 per cent Black or Puerto Rican.
**Defined as less than 90 per cent Black or Puerto Rican.
†One Year = 10 Months

Even among 150 black/Puerto Rican schools, the average figures mask some very notable differences. For example, 24 schools in this group registered an average improvement of 1.5 years.

For the 150 black/Puerto Rican schools, as with the total City universe, quantitative measures of pupil or school characteristics (see page 00) did not correlate in any substantial way with the change in reading scores, except if the absolute reading level itself was taken as an independent variable.

Predominantly Puerto Rican schools appear to have about the same

scores as predominantly black schools. Non-English speaking pupils are informally evaluated on a scale of A through F for fluency in English. C is the minimal fluency for regular class assignment, but students are included in the regular testing program only at the discretion of the teacher. There were approximately 110,400 children in the City school system in 1967-68 who were evaluated as C, D, E or F on the fluency scale. In grades kindergarten through 6th, 81,400 pupils have been evaluated as reading from C through F, or about 13 per cent of the elementary school enrollment.

In 1968, the City employed about 175 teachers of English as a second-language, not all of whom were full-time staff members. Some critics assert that the number of teachers and the time available for instruction are inadequate to provide educations for the number of non-English speaking children.

Money and Output

Expenditures for each school include the amount of City and State money allocated to the school (exclusive of funds for capital improvements) and money from Federal aid, primarily funds under Title I and other provisions of the Elementary and Secondary Education Act. Per capita costs in the 150 schools with enrollments 90 per cent or more black and Puerto Rican averaged $839 in 1967-68, ranging from a low of $529 per pupil to a high of $1,560.

Regardless of the variations in socioeconomic characteristics of the students in these 150 schools, there is no statistical correlation between the aggregate amounts of money spent per pupil and the improvement in reading scores from one year to the next. In other words, in these 150 schools, preliminary evidence does not appear to indicate that an expenditure of one amount is any more effective in changing a pupil's level of achievement than an expenditure of another.

The lack of correlation in black/Puerto Rican schools between changes in achievement and the absolute level of quantitative factors such as higher-salaried experienced teachers or school equipment (as indicated by per capita cost figures) raises the question of whether or not continued indiscriminate funding of these items will in and of itself necessarily increase educational output proportionately.

An interesting case in point is the More Effective Schools (MES). These schools offer a particularly intensive combination of resources to prevent and compensate for academic failure. Like Special Service schools, additional teachers and equipment are supplied, although to a much greater extent. The 21 schools in the MES program (to be increased to 31 by the new United Federation of Teachers contract) provide a host of supportive and innovative services to the children. For example, class size is reduced to a maximum of 15 in kindergarten and the first grade, 20 in the second grade, and 22 in grades three through six. Extra teachers are made available as well as guidance and medical services. The objectives of MES are to enhance

reading and math skills as well as to increase pupil interest in education, promote higher staff morale and incorporate parent interest into the educational process.

The per pupil costs of instruction for these types of schools vary significantly. Regular elementary schools have the lowest per capita cost, averaging $829. Special Service schools cost about $930 per pupil, and the MES average $1,400. Both the Special Service schools and the More Effective Schools were established to compensate for educational disadvantage and, on the average, the two programs service essentially the same type of students in terms of racial and poverty characteristics. Using the basic data from earlier analyses, the average poverty level in the Special Service schools is 55 per cent, while in MES it is 58 per cent. The percentage of white students averages about 16 per cent in the Special Service schools, while they comprise 19 per cent of the enrollment in MES. (The poverty level for regular elementary schools is 13 per cent and the average white enrollment is 75 per cent.)

The table shows the estimated cost per pupil, the improvement in reading score, and the "cost for each month of improvement" (dividing total cost by the number of months of improvement). The regular elementary schools serve a more "advantaged" group of students, and no genuine comparisons can be made between the achievements of these schools and the Special Service or More Effective Schools. However, since both Special Service and MES reach essentially the same type of student body, some crude costs comparisons between them can be set forth in a very tentative and approximate sense.

Cost and Achievement Comparisons

	Estimated Cost Per Pupil	Change From 4th to 5th Grade Reading Score	$ Per Month of Change
Regular Day			
Elementary Schools	$ 790	1.2 (years)	$ 66
Special Service Schools	$ 887	.9	$ 99
More Effective Schools	$1,200	1.0	$120

Notes: Data for 1967-68, Executive Budget.
Calculated from available data for 325 regular elementary, 232 Special Service and 20 MES, academic year 1967-68.
One Year = 10 Months

Using costs and scores in 1967-68, the More Effective Schools cost almost 35 per cent more per pupil than the Special Service schools.* The improvement in reading scores was also greater in MES than in the Special Service schools. The MES children had a 1.0 year improvement from 1967 to 1968; the Special Service children, 9 months. However, it might be argued that the City was paying an additional

*As indicated earlier, the spread in costs between these two programs has jumped to about 50 per cent. Preliminary analysis of a sample of 1969 scores suggests that costs per month of achievement remain substantially higher in MES than in Special Service schools.

35 per cent to get one more month of achievement (in terms of test scores). Stated slightly differently, in the Special Service schools, each month of improvement cost about $99—in MES, each month cost $120. Achievement is very important, but it is legitimate to ask at this point whether or not the "output" justifies the cost.

The Role of Quality

Good education, like any other service, needs adequate funding. The appropriate question is not how much expenditures will be increased, but to which inputs monies will be directed. In a sample group of 14 black/Puerto Rican schools, each principal was interviewed to see if his attitudes about the roles of administrative and teaching staffs correlated in any way with the improvements in reading. A "School Quality Index" was derived, and seems to explain 74 per cent of variation in reading score improvement in the sample.

Significant improvements in reading skills were associated with a principal's belief that he had a competent professional staff in the fourth and fifth grades, respected his teachers' aides working in the classroom and used them extensively, had meaningful parent and community involvement in the school and practiced or supported innovative administrative or teaching techniques. Relative backsliding in achievement was associated with opposite attitudes.

Even if the high coefficient of correlation is discounted somewhat because of the subjectivity necessarily involved in translating attitudes (qualitative) into a numerical index (quantitative), the resulting numbers appear to be, at the least, provocative.

Two elements appear to be at work in those schools that yielded the high correlations. First of all, a school which manages to involve the total environment of the child into the education process has more resources, both tangible and intangible, available for education than a school that does not. Secondly, for a combination of these factors to be operating, the staff, the community and the children must have respect for themselves and the other participants in the school.

It is increasingly apparent that children with educational disadvantages need a multitude of services to help compensate for a heritage of poverty. Every resource available to the school should be used to educate the child to learn how to learn. This means significant parent and community involvement working with and helping those entrusted with the education of their children. It goes without saying that communication and flexibility are key responses for all groups concerned.

The role of the children themselves should not be understated. Many educational authorities believe that children can perform more constructively in furthering their own education. In particular, some children may well have the ability to teach or help teach others, and such opportunities should be explored and utilized.

Nor should the purely physical factors be neglected. To be sure, the

evidence appears to suggest that reductions in class size and physical structuring (whether it be in the form of full-fledged educational parks or simply a program to relieve overcrowding) can be negated by shortcomings in instructional quality. Nevertheless, for best results, improvements in quality of principals, teachers, etc., should be accompanied by improved physical conditions in the schools, reductions in class size where appropriate and other quantitative measures.

All this will take money, and there is no question that the education system needs a great deal of it, especially in view of the great payoff for society from the right investments in quality education. □

Intermediate and High Schools

Component Parts

Originally, elementary schools were organized for students in grades one through eight, and completion of the eighth grade was marked by a graduation ceremony. For many, this marked the end of formal education. The changing demands of a technical society, in conjunction with more stringent child labor laws and mandatory increases in the number of years a child had to remain in school, resulted in an increased high school enrollment. The response of the high schools was to provide more varied curricula, often geared to the special vocational needs of those who planned to go immediately to work.

Intermediate (junior) high schools were popularized in New York during the 1920s, and included grades seven through nine. Educators recognized the need for an institution to provide an academic and emotional transition between elementary and secondary education. However, the junior high school came into being only after intensive labor pains, for neither the elementary nor the high schools wished to relinquish control to the junior highs. In many ways, the organization and prestige of the junior high schools still reflect their earlier "stepchild" status.

Enrollment in the junior and academic high schools stood at 222,000 and 230,000, respectively, in 1967-68. This represented increases of 31 and 23 per cent, respectively, since 1957-58, and reflected the changing ethnic distribution of the public elementary schools. Last year, about half of the junior high school students and 36 per cent of those in the academic high schools were black and Puerto Rican.

In the vocational high schools, enrollment at 42,000 in 1967-68 had increased by only 2 per cent over the decade. About 60 per cent of the vocational students were black and Puerto Rican. Vocational education is designed, too often, to provide graduates with specific, generally blue-collar skills, in a labor market that is increasingly white-collar and service-occupation oriented.

In 1964, the Allen Report recommended that the existing academic and vocational high schools be reorganized and combined into comprehensive high schools, which would enable students to select among different curricula, or elements thereof, while attending the same schools. In addition, the comprehensive high school plan would eliminate the general diploma, provide more intensive guidance and enable a child to choose a vocational curriculum in the 11th or 12th grade, rather than the 10th grade as at present. The Board has had plans for several years, but administrative and construction delays have slowed the implementation process.

Comprehensive high schools would incorporate grades nine through 12, and the junior or intermediate highs would then take over grades five through eight, with the first four years of school undertaken in the elementary structure.

Some Problem Areas

Although there are no universally acceptable or complete figures to

indicate the number of high school dropouts, some knowledgeable persons estimate that two fifths or more of those who enter high school do not complete it. This figure would closely correspond to the percentage of children who are reading two or more years below grade level in the ninth grade.

Traditionally, the predominant way of grouping students is by "tracking," whereby children of like achievement levels are kept in the same class. Children rarely move from low to high tracks, and low achievement in elementary school appears to be conducive to the same pattern in junior high and later in senior high school. Intermediate school graduates are placed in high school programs (i.e., general as opposed to academic) on the basis of their 3rd term marks in the ninth grade (or eighth), and classes are established in the late spring without necessarily consulting with the pupils themselves. Low achieving pupils are put into the general or commercial diploma course, from which it is difficult to shift to an academic course. To be sure, reading scores of many high school students look dismal, but greater flexibility in class placement, etc., might help to bring previously untapped intellectual potential to the surface.

Graduation with an academic diploma indicates the successful passing of specified New York State Regents examinations and is a basic credential for college admission. In 1968, 48 per cent of the graduates from the regular academic high schools received such diplomas. (This figure would be considerably smaller if the pupils who dropped out of school had remained until graduation.)

Graduates with a general diploma have fulfilled less rigorous course requirements (for example, general math rather than algebra). Some observers refer to it, cynically, as a "certificate of attendance." Black and Puerto Rican children account for a disproportionately high percentage of such diplomas. In three regular academic high schools where two thirds or more of the graduates received only general diplomas, enrollments were predominantly black and Puerto Rican (ranging from 75 per cent to over 96 per cent). The three schools with the lowest percentages of general diploma graduates were schools with predominantly white enrollments (75 per cent or more). The ninth and tenth grade reading scores in the three schools with a high ratio of general diplomas were also significantly below average, with the pupils reading almost three years below normal achievement.

Learning problems are augmented in many cases by general malaise which has its origins in larger problems facing the society and the nation as a whole. In the high schools, as in the colleges, these feelings have contributed to some measure of unrest, particularly when the students feel that their aspirations are being thwarted by "the Establishment."

The prevalence of narcotics in a number of high schools and even some junior highs also affects the school climate. While no official records are kept, unofficial estimates place the percentage of drug-users (primarily marijuana and heroin) at nearly 40 per cent of student enrollments at some schools, with perhaps 20 per cent of the users afflicted with severe addiction problems.

Costs

The 1969-70 Executive Budget of the Mayor estimates that about $543 million of the $1.2 billion designated for instruction costs in all schools will be allocated to intermediate and high schools. The estimated cost per pupil for 1969-70 will be $970 in the regular intermediate schools, $1,070 in the Special Service intermediate schools, $1,268 in the academic highs and $1,798 in the vocational highs. In addition, a few specialized but small high school programs operate at costs of over $2,000 a student.

The significantly higher costs of vocational education are probably attributable to lower pupil-teacher ratios (about 16½:1 in vocational vs. 21:1 in academic) and higher operating costs for instructional equipment. In view of the instances of mismatch between much of the vocational schooling and new job opportunities, it is questionable whether all of these large expenditures can be justified in terms of either the economic and vocational needs of the City or the surrender value of this education to the student himself.

For the future, financial pressures will come not only from operating costs, but also from capital costs, which are slated to rise substantially. High school construction has lagged severely behind needs. In academic high schools, average enrollments are more than 130 per cent of capacity, with several schools operating at close to 175 per cent of capacity, resulting in double or triple sessions. The vocational highs are not as crowded, but generally operate at about capacity. □

Where Does the School System Go from Here?

Managing By Results—and the Decentralization Question

The preceding inquiry into the schools leaves some doubt as to whether or not resources are being allocated most efficiently and results are commensurate with money spent.

It might be argued in defense of the existing system that various new programs require more time (and more funds) to reach their full potential. However, it appears that some ghetto schools which have been staffed by high-quality principals and teachers have shown significant improvements in relatively brief spans of time.

Perhaps, therefore, more attention should be given to the selection and evaluation of principals and teachers for the disadvantaged. This might include a review of the examinations for the key policy posts of principal and assistant principal, presently supervised by the Board of Examiners. Successful passage of these exams depends more often than not on memorization of extensive materials regarded by some as "trivia," and coaching courses abound to enable one to pass the exam. Critics assert that these exams have never been adequately scrutinized by independent testing consultants, and claim that there is no evidence that the exams measure a candidate's administrative, teaching or factual ability.

One might argue that the most important attribute of a principal or teacher should not be whether he is liked by his superiors, his peers or even the community, but whether he is able to elicit satisfactory improvement from the children he teaches.* Might it not make sense that allocations of funds (and the question of centralization/decentralization) should follow from this basic principle?

It might be worthwhile for Federal and City educational authorities to explore whether or not Title I and other monies could be put to good advantage by providing principals of disadvantaged schools with discretionary funds to use for whatever special purposes they themselves deem necessary to improve achievement levels in their schools. Thus, some principals may emphasize smaller class sizes; others might hire remedial reading teachers or aides; others may concentrate on teacher training; yet another might invest in audio-visual aids; while others may place emphasis on special courses and activities for parents and other community members. As part of this overall concept, the principals involved would also have a certain amount of discretionary authority with respect to curriculum (e.g., additional time as well as staff for teaching English to non-English speaking children). The critical point is that decisions on special funds, curriculum adjustments, etc., and the ultimate accountability for the effectiveness of the monies and programs would be concentrated in the same person—namely, the principal.

In sum, the principal would be given the funds and the freedom to

*The new United Federation of Teachers contract makes reference, although in generalized and vague terms, to the need to develop "objective criteria of professional accountability" for teachers.

succeed and be held accountable for results. To be sure, this is easier said than done. Measuring achievement even in subjects such as reading and math is still not an exact science. Moreover, how would achievement of behavioral goals be evaluated? And what would "accountability" really involve once "objective criteria" are developed? Would inadequate teachers and principals, particularly in disadvantaged schools, be transferred out or even removed? Would teachers whose students achieve outstanding results be appropriately rewarded? And if so, by some sort of special money bonus, or would they just be given nonmonetary incentives?

It does seem that if "accountability" attains a position of preeminent importance in the schools, it may well be that neither total centralization not total decentralization is called for. On the one hand, the definition of the broad overall objectives of education and the consequent establishment of criteria call for a certain amount of standardization and uniformity (although the centralized educational philosophers and those devising and administering tests must be sensitive to the realities of the school population in terms of race, poverty, etc.).

In setting specific target levels for improvement in each area of study in each school, if this approach be used, the central board might oversee the process which would fundamentally be undertaken by teams consisting of the local board, district superintendent and principal of the school in question. This is no simple matter in practice. Even after three years of a Planning Program Budgeting Systems program, the Board of Education still lacks the detailed operational data which is a prerequisite for any rational setting of targets for individual pupils or even individual classes or schools.

Meanwhile, it might be most logical if details of inputs into "disadvantaged" schools would be handled at the most decentralized professional level—the principal. The principal, in turn, needs to elicit and win the support of the local community if he is to be successful in achieving his overall mission. The community must be drawn into close cooperation with the principal in guiding and promoting the education of its children.

Potential Roles For Business

The interest of business in education is threefold:

First, every factor which affects the environment has a decided impact on business. This could be the purity of the air, the efficiency of the transportation system—or the quality of education.

Second, since more students eventually go into the business world, business has the greatest amount to gain—or lose—by the quality of the educational process. Every enlightened businessman realizes that the student of today is the employee of tomorrow and will directly determine the ability of business to accomplish its own objectives. As a part of this realization, some businesses already fund "Street Aca-

demies," aimed largely at getting disadvantaged high school dropouts back on the educational track.

Third, business, through the tax system, might be considered a major underwriter of public education, and thus has an interest, if not an obligation, in making sure that funds for education are spent most effectively.

A number of problems faced by the schools are essentially similar to problems which businesses successfully deal with on a day-to-day basis. For instance, sound business thinking could well be applied to the problems of school overcrowding in order to devise the most efficient allocation of time and space so as to minimize the overcrowding. More generally, business could provide meaningful assistance in cost-effectiveness education.

Most pertinent of all is the role that business can and should play in establishing a link between the high schools and the world of work. Such an involvement, at a minimum, might consist of career guidance, placement assistance, and some measure of work-study programs.

In order for business to be truly effective, however, there should be a radical change in its role vis-à-vis the high schools. In New York City, up to this point, the major business orientation in the high schools has been the vocational education programs which are, however, largely blue-collar and thus becoming obsolete in terms of the changing structure of the City's economy.* It would seem to make sense to reorient our concept of vocational education more towards white-collar training rather than some of the conventional manual skills.

Planning for the future, businesses with corporate head offices in New York City, accountants and other business services, real estate, insurance, banking and finance should devise specific programs, where appropriate, jointly with the public school authorities for high school vocational training. This would involve joint planning on curriculum, training of teachers by business and mutual exposure. The specific programs would have to be on a scale relevant to the anticipated employment needs of the various industries. The essence of the whole idea is to establish a link between what the youngster is doing with himself in the high school and what type of job opportunity he has once he completes his education.

More broadly, business has a role constantly to reexamine the public educational system in an objective, dispassionate way, to explore how resources are being used, and to promote improvements for the benefit of the schools, the pupils in them and the society as a whole. □

*See *Poverty and Economic Development in New York City,* pages 8 and 9.

An Appendix: Preschool Programs

In New York City, preschool programs* of all types serve approximately 160,000 children from ages two through five, double the number of a decade ago. The bulk of the growth stems from kindergarten and prekindergarten programs in the City schools, Head Start by the Community Development Agency and the inauguration of programs by other interested groups.

Preschool Programs in New York City, 1968

Program	Number of Children	Per Cent
Kindergarten, public	90,000	57
Prekindergarten, public	9,100	6
Head Start, full year	5,500	3
Head Start, summer	22,000	14
Other**	32,000	20
Total	158,600	100

**These include parochial schools, social, community and philanthropic organizations, private schools, voluntary agencies, colleges, hospitals, cooperatives and proprietary nursery schools.

Preschool Under the Microscope

The few programs in New York which have been comprehensively evaluated have shown inconclusive results as to the return on investment. One factor hindering effective preschool evaluation is the difficulty involved in constructing adequate instruments to test very young children, often from widely diversified backgrounds. A further contributing factor is the inadequacy of financial support for thorough appraisal.

As a case in point, the recent nationwide evaluation of Head Start centers (including one in New York City) by Westinghouse Learning Corporation (April 1969) asserted that there were relatively small increases in cognitive ability after the full-year remedial program. The validity of the data has been challenged, however, by experts who question the sampling and testing methods used on which these conclusions are based.

However, a number of small experiments have been conducted with both average and disadvantaged young children, with testing of groups carefully controlled. In some of the programs, notably those conducted by Dr. Martin Deutsch, director of the Institute for Development Studies in New York City, substantial gains over a period of years in scholastic achievement by experimental groups have been found.

One eventually must face the question of priorities. Given present funding, there exists a temptation among even the most knowledgeable authorities to parcel out portions for sporadic attempts to upgrade scattered groups of preschoolers. Dr. Martin Deutsch describes the situation as follows:

*Defined by the Health Department as six or more children enrolled in a program which meets at least five hours a week and more than a month per year. The service can be known as a child care center, day nursery, day care agency, nursery school, kindergarten, play school or by any other name.

*There is tremendous pressure to set up programs without adequate preparation and training of teachers and without a well-developed curriculum. I think that greater immediate emphasis should be placed on universal kindergarten, with reduced pupil-teacher ratio.**

Trying to Equate Supply and Demand

When proven techniques are applied to seriously deprived groups of children which are too large, results indicate that, at the preschool level, monies which are spread too thinly often lose their effectiveness per dollar.**

Present preschool educational programs in New York City fall considerably short of universal coverage. Defining potential demand as the total three-, four-, and five-year populations, currently early childhood education covers only about 40 per cent of this potential "market." Moreover, distribution of coverage that does exist is not always rational. A large number of five-year olds in poverty areas cannot be accommodated in kindergartens because of lack of space. In these same areas, however, prekindergarten classes are sometimes offered to disadvantaged four-year olds. These youngsters then take a year's "sabbatical" until they begin first grade.

For many welfare mothers who have dependent children, day care with the necessary quality educational component is sorely needed. In a survey of welfare families, about 60 per cent of the mothers felt that they would prefer to work if adequate provision were made for their children.*** Although additional funds for day care are available through Federal and City agencies, planning and administrative delays have retarded necessary expansion of facilities. For example, the 1967 Social Security Amendments provide 75 per cent in matching Federal funds for day care services to children of welfare recipients who are referred for work by the State Employment Service. However, only 10 per cent of New York City welfare mothers have been referred. (Some of the needed extra funding for the current year will be made available through the 1969 contract with the United Federation of Teachers. The contract provides that day care centers be established in 50 schools throughout inner-city areas for both welfare youngsters and children of teachers.)

Professional day care, with a strong educational component for children of working mothers, costs about $1,800 per child per year. This is expensive and efficient operation may well reduce this figure. However, on the other side of the balance are high welfare rolls and other costs associated with perpetuating the cycle of poverty and educational unpreparedness.

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*_Pre-School Education Today_, Fred M. Hechinger (ed.), 1966.

**Dr. Deutsch has estimated that an effective preschool program costs between $1,000 and $1,200 per child a year. Expenses for kindergarten and prekindergarten in New York City public schools averaged $675 in 1967/68.

***Dr. Lawrence Podell, _Families on Welfare in New York City_, 1969.